Western Watersheds Project

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Working to protect and restore Western Watersheds

March 11, 2014

Jay Winfield, District Ranger
Salmon-Challis National Forest
Salmon-Cobalt Ranger District
311 McPherson St. South
Salmon, ID 83467
Comments-intermtn-salmon-challis-salmon-cobalt@fs.fed.us
kgoessel@fs.fed.us

RE: Panther (Big) Creek Geothermal Leasing,

Dear Salmon-Challis Forest Service Ranger Winfield and Ms. Goessel and Idaho State BLM Director,

We are very surprised and concerned that the Salmon-Challis Forest is scoping Idaho BLM's proposal for geothermal leasing of a large and very sensitive land area by Big Creek/Panther Creek Hot Springs adjacent to the Frank Church Wilderness west of Salmon.

The proposal would affect a huge land area in an extremely sensitive setting. It will impair, destroy and irreparably harm Wilderness values – scenic, biological, wild land/naturalness, etc.

The affected watersheds are home to anadromous fish bull trout and other native salmonids. There are already serious water quality concerns, and foreseeably much greater ones if mining, geothermal, new roading and grazing all occur in the watershed. What is the road density, and what are the effects of all the roading on wildlife, water quality, aquatic species habitats, big game, recreation, spread of weeds, etc.??

The activities associated with this project will greatly affect both underground and surface waters.

This is a large land area in wild, rugged terrain – encompassing 5602 acres, over 8 square miles

that may be torn to pieces, and hot spring as well as cool water springs over much larger areas that also may be impaired or ruined altogether. Clearly an EIS is required to assess all direct, indirect and cumulative effects - and the many ESA species issues as well, ranging from bull trout to steelhead/Chinook salmon to wolverine. Regrettably, agencies are proposing a mere EA to set the stage for large-scale harmful development. Once leasing is allowed, this very harmful BLM geothermal leasing process becomes a juggernaut of sorts, impossible to really turn back.

There is nothing at all "renewable" about placing an industrial facility like this in the middle of nowhere.

Information on the BLM proposal the Forest is carrying out:

http://www.fs.usda.gov/wps/portal/fsinternet/!ut/p/c5/04_SB8K8xLLM9MSSzPy8xBz9CP0os3gDfxMDT8MwRydLA1cj72BTUwMTAwgAykeaxRtBeY4WBv4eHmF-YT4GMHkidBvgAI6EdIeDXIvfdrAJuM3388jPTdUvyA2NMMgyUQQAyrgQmg!!/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfS000MjZOMDcxT1RVODBJN0o2MTJQRDMwODQ!/?project=37800

My recent experience with the McGinness Hills BLM geothermal project (see EA on cd) in NV is that leasing bleeds into exploration and the impacts of exploration include new large bladed gravel roads, acres of large bladed well pads, waste water ponds, ugly fencing, and a general torn up landscape and ruined mess - and that is in **flat terrain.** Not the rugged central Idaho country**.**

BLM/agencies never have enough solid baseline information upfront to understand the full impacts if they conduct an EA or CE, and are in hot water over their heads/significant environmental damage and harm, including to sensitive species habitats and populations- by the time all the studies are done post-facto AFTER authorization of leasing. Sadly, our experience has been that with projects like McGinness Hills (and like Panther will be) that are conducted under the minimal stipulations and BMPs of the BLM's exceedingly meager and spare old programmatic geothermal EIS, it is only after the project has moved far along, and extensive damage has been done, that the true range of environmental harms known.

In the Panther Creek watershed's rugged, steep mountainous watersheds and terrain ---- lands will be much more torn up than the areas I have depicted in photos below in NV geothermal development, with ravaged mountain sides, greatly excessive soil erosion, sediment pouring into downstream bull trout and anadromous fish habitat, torn up scenic landscapes, new areas of weed infestation, increased herbicide use with runoff contaminating waters, year-round disturbance of wildlife ranging from wolverine to elk, an extensive array of harms to aquatic biota and non-target species, and a host of other serious adverse effects. The Forest needs to conduct a current EIS to analyze herbicide effects and cannot rely on the BLMs deficient programmatic EIS in these ESA watersheds to understand and limit harm from toxic herbicides, degradates, break-down products, and use of multiple types of herbicides with runoff and drift potential.

In fact, the country gets torn to pieces to such a degree in the geothermal "exploration" phase that the later stage - "development" i.e. a huge factory-like facility with belching steam stacks in

the middle of nowhere and big powerlines - becomes inevitable. See photos below

The underground water in aquifers also gets blasted to pieces in the "explo" phase - by underground detonation of charges. Strata may be permanently altered and destroyed. Yet agencies have failed to require in depth aquifer and watershed studies before issuing leases that are directly tied to the exploration destruction.

Thus, measures to prohibit fracing, underground blasting, etc. can not be put in place. ALL of this must be prohibited under any lease that you may issue – upfront as part of an EIS for this project. This project's activities can release harmful explosive or fracing chemicals, and hot water from depth at times has arsenic and other harmful metals. Plus new and old mining may increase polluting toxic materials. See consultation for cobalt Mine discussing cobalt. This discusses pumping, so this bound to affect underground strata to a completely unexamined degree in the Scoping material. The inadequate consultation even describes setting criteria for harmful cobalt pollution. Plus waste rock will erode harmful materials, and they will blow in dust that settles into water, as well.

Modern geothermal development can involve the use of **fracking** to open up underground hot water "seams" and keep the water flowing, even causing **mini-earthquakes**/seismicity. Fracing can involve a host of harmful substances that result in long-lasting pollution.

This Forest's range staff (Barry Dopp and others) have often claimed that the Borah Earthquake caused springs to dry up in the East Fork Salmon and Pahsimeroi country - and that their on livestock water developments had nothing to do with springs going dry. This would appear to show the extreme sensitivity of SCNF springs to any disturbance underground, including geothermal drilling and underground detonations opening up hot water "seams". This, if geothermal leasing sets in motion activities leading to this irreversible harm, it represents undue degradation. Where are all springs connected in any way to this watershed or affected aquifers? What are their flows? How might this project (and/or foreseeable large-scale cobalt or other mining) affect flows? Will there be aquifer drawdown with the cobalt mining? We are attaching the inadequate mine and other Consultation documents for a foreseeable very damaging mine. These do not adequately consider the adverse effects on water quality, flows, surface expression, sediment pollution, and other impacts of modern day mine in the Panther creek watershed. Where all exiting mine claims? Please provide a map. How about other geothermal claims? Will additional claims likely be staked? If so where? What would be the environmental effects to waters, watersheds, rare species, recreational/Wilderness/WSR and other values if mining, a geothermal plant, new powerlines, etc. ALL are imposed?

The leasing area extends north from the hot spring drainage to the rim above the Salmon River Wild and Scenic River corridor, and will substantially mar and despoil that area - as well as have a profound negative impact on the Frank Church Wilderness to the west. This represents undue degradation.

There is nothing innocuous about current industrial-scale geothermal as carried out under the BLM geothermal PEIS and stipulations. Plus, after one Phase is built, there is likely to be

"expansion". What other areas hold potential, and what would be the direct, indirect and cumulative effects of development there?

There may be toxic materials in geothermal water brought to the surface, and the steam at times, too – such as naturally occurring arsenic or other minerals. And who knows what substances if fracking or other polluting chemicals are used to get at the hot water.

There is a pre-existing older mine site mining contamination of waters here already (sent info in e-mail comment to Forest on this –Blackbird mine). Now you are proposing an activity that could greatly increase sediment, and potential heavy metal or other harmful materials. What baseline studies have you done on existing toxics across the affected watersheds and landscape, including in Panther Creek throughout its length, and in the Salmon River ? Please provide us with any information is it is available, so that we can make fully informed comments. Any additional contamination, pollution, sedimentation, etc. here represents undue degradation.

There is a great lack of baseline information in the Scoping proposal, including detailed studies about hydrology, aquifer studies including studies on the connection of springs to aquifers, types of springs, water chemistry and potential toxic material use, effects of climate change on some types of springs, native biota inhabiting or dependent on them, and other potential effects on springs - both hot and cold, and many other values of the watershed, wildlife, aquatic biota and recreational uses and enjoyment this project may affect.

The Forest says something here that BLM never made clear in geothermal leasing before and we never understood before.

It sounds like all the stipulations able to be considered are laid out at the leasing phase - which is an **environmentally disastrous** way to do a project where more information is typically acquired as later stages would occur, and thus more necessary protections would need to be put in place in stipulations – but they would be precluded by the crazy BLM regulations:

The applications are for leasing only. No ground disturbing activities are proposed at this time. Prior to any ground disturbing activities, the lease holder would be required to submit a separate
application for drilling and a plan of operations for development to the BLM for review, analysis, and separate approval. At that time, the BLM (lead agency) would conduct additional site-specific evaluations, in cooperation with the Forest Service, and may require additional reasonable mitigation measures prior to approval for drilling or development. ***However, new stipulations could not be developed at that time.*** *Holders of geothermal leases are required to comply with all applicable federal, state, and local laws and regulations, including obtaining all necessary permits required, should lease development occur.*
It is important to be aware that the Forest's discretion is limited by the fact that the application area has not been withdrawn from leasing; therefore, the Forest is required to complete this exercise. After we have completed the leasing NEPA and BLM offers the lease(s) with our stipulations, the applicant has to decide whether to accept our conditions in order to obtain the lease. Alternatively, the applicant could appeal our stipulations, contending they are

unsupported by higher level decisions (e.g. Forest Plan, statues, regulations). ***So we have to be very precise in defining and rationalizing our stipulations****.*

The list of stipulations is greatly inadequate to address the needs of native biota and protect Wilderness, WSR, watersheds, ESA species and other important and irreplaceable values here.

We request that the Forest (working with BLM) do a LUP amendment and remove the lands from the potential for leasing. This is a viable alternative.

We also request that the Forest (working with BLM) pursue a Withdrawal of these lands from leasing. Is that possible to do for geothermal? See http://www.blm.gov/or/landsrealty/lowauth.php This is a viable alternative.

There are several links on the right side that discuss withdrawals. There is also this link:

http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&rgn=div5&view=text&node=43:2.1.1.3.53&idno=43#43:2.1.1.3.53.2.58.2

See Number One here: Lands where the Secretary determines that development would cause unnecessary and undue degradation. That is certainly the case here. How does one go about getting this determination made?

Development would mean major road upgrades, a slew of new roads, large-scale new transmission lines in sensitive habitats, and a host of other adverse actions. This would be foreseeably coupled with major mine development a similar nightmare of disturbance to sensitive waters, watersheds and rare and important native biota in this same watershed. Getting a new major powerline into this area could open up the whole landscape to large-scale new mining or other Reasonably foreseeable development and ruination. ALL of these impacts must be fully assessed under NEPA under an EIS at this initial stage in order for the agency to even consider leasing here. Please do not segment NEPA analyses.

I recall Idaho BLM doing a withdrawal for picture jasper mining claims in the Bruneau River canyon. Can the same be done here? I also recall Sheldon NWR recently doing a mineral withdrawal to limit mining claims on the Sheldon Refuge.

How can an agency be very precise with what all is actually necessary for mitigation and protection as stipulations/BMPs upfront - without very extensive multi-year studies of all facets of the environment – including watershed runoff studies, sediment loads during all season of the year, sediment levels current in waters in this watershed, temperatures, etc in waters? There must also be underground aquifer studies including of the local and regional aquifer, studies of wolverine and other species, wildlife cameras set up to detect native carnivores, migration use of the river corridor and this landscape by migratory and migrating birds that may be killed and injured by powerlines, or have habitat altered, degraded, fragmented, or the birds themselves be harmed or "taken".

Again, usually the studies necessary to understand the seriousness of these impacts do not happen until the later phases of the geothermal process under the flawed BLM process. In this case, if BLM persists in the madness of trying to lease these lands, then five years of intensive studies are needed by the Forest before issuing any leases in order to develop a full body of protective stipulations, as well as to adequately consult under the ESA on this proposal for bull trout, anadromous salmonids, wolverine, and other threatened and endangered species, as well as to understand the full body of direct, indirect and cumulative effects on rare sensitive species such as native amphibians and migratory birds, and big game.

We are very concerned about potential impacts on native carnivores, human disturbance and intrusion in remote wild areas, as well as habitat intrusion and alteration for all species (bighorn sheep, elk, mule deer, wolverine, lynx, fisher, gray wolf, etc.). Please note the map with this Wolverine article (and the story of Socks):

http://www.svguide.com/w06/w06_wolverines.htm

There appear to be several wolverine **confirmed occurrences** in this area. The last thing wolverines or any other native wildlife need in tis part of the world right now is more human disturbance during sensitive winter and other periods.

We also are alarmed that BLM is relying on its already long-outdated, minimal, and deficient Programmatic Geothermal EIS. That document has scarcely any information of substance at all, fails to consider all the ruination of land, water, wildlife habitat and recreation that can result from modern day industrial geothermal leasing, explo and development.

The Forest must forbid surface occupancy on all acres of Forest land.

We are also attaching a Williams-Napias AOI, and note the greatly deficient standards to limit cattle impacts to upstream Panther Creek waters, watersheds, wildlife habitats, bull trout and other ESA species habitats. Please provide al monitoring actual use, and all ecological condition information related to grazing in this watershed, as well.

The allowable use standards for the Williams-Napias C&H allotment are listed below. It is your responsibility to monitor utilization levels and to move your livestock to the next unit planned or off the allotment when the standards have been met. If you need assistance determining utilization levels please contact Sara Norman and she will assist you. Cattle removed from a unit after utilization levels have been reached are not allowed to return to the unit. The Forest Service is responsible for monitoring your compliance with allowable use standards.

Unit	*Upland*	*Riparian*
Spring Creek/Williams	*3-4”*	*4”*
Phelan Creek	*4”*	*5”*
Deep Creek	*4*	

The above is from an AOI and shows how inadequate standards are. There are no standards on springs, and very heavy use levels are allowed. This adds to the indirect and cumulative effects

to this watershed from cattle grazing, and this must be considered another significant existing stress on this beleaguered system.

GEOTHERMAL PHOTOS

I had tried pasting these illustrative photos of some aboveground impacts and footprint of geothermal activity in a previous e-mail, but that apparently did not work. So here is another effort at that.

First Photo. McGinness Hills BLM Exploration phase. All of this is **new disturbance** – there were many, many of these sites – with brand new roads going to them. Many new bladed off graveled big flat areas like in this photo. Now imagine what the Panther Creek terrain will look like. There were also new waste water ponds with explo, heavy equipment all over the place, etc.

Drill rig at another NV geothermal development site down by the Stillwater Range - the little white things are trailers ... Looks like the BP **Deep Water Horizon** on dry land ... How much dynamiting, bulldozing, etc. will be required to get this up a 40 degree slope perched above the Salmon River WSR corridor?

Imagine maneuvering this monster up a 40 degree Panther watershed slope. How much cut and fill and erosion will this entail?

Stillwater geothermal plant “factory in the desert” ... An eyesore with night lights, steam that may contain arsenic and other harmful minerals, powerlines, etc.

Release of steam from underground waters may release toxic material into the air as steam or water discharge into ponds or elsewhere. This may have toxic metals like arsenic or other harmful substances. These harmful substances may impact sensitive species, humans recreating n

the area - in Wilderness, roadless areas, public lands. Contamination and pollution of heavy metals or other toxic substances may poison the Wilderness, salmonid streams, native rare amphibian habitat, and otherwise harm and destroy the immense values of this wild land area. There is no way such a massive undertaking – result in in what would be essentially a battery of new and/or expanded roading, factory-like facilities, clouds of steam and waste water with toxic material, etc.

We are very concerned to see that the Forest is proposing only an EA. An EIS is essential, as the damage done in geothermal exploration bleeds into development under the greatly deficient process. An EIS must be prepared to protect the extraordinary wild land, ESA listed fisheries, forested wildlife, recreational values including those associated with geothermal waters, and other very important values of Forest lands that are greatly threatened by this proposal, and all its direct, indirect, cumulative and linked impacts.

This project may permanently alter and destroy underground aquifer waters and layers.

It may deplete springs and spring flows great distances away from the lease/lease development sites.

We are alarmed at the incremental greatly segmented process by which "exploration" bleeds into full-blown development, and this lease issuance will underlie it all.

Full and detailed analysis of all changes in water flows, studies on aquifers, and full baseline information on springs over 00 mile radius must be collected.

Wilderness waters may be depleted. Bull trout, salmon-steelhead, rare frog and other waters may be depleted.

All of these impacts will be amplified by the adverse impacts of climate change.

All logging, "treatment", roading, mine, grazing, potential forest health, the after-effects of wildfire and impacts to recovering atersheds, and other disturbance across this landscape must also be critically examined. This all combined will impact native terrestrial and aquatic species, and lead to losses in habitat and populations.

Will steam released from a potential factory-like plant contribute to potential winter inversion conditions? If so, how will that affect wintering big game or other wildlife or the environment?

Any exploration must be done without any surface disturbance, cross country travel, or roads. This must be a condition of the lease.

The Forest must deny this request. These lands are not capable or suitable of supporting it. A full capability and suitability analysis must be conducted. All the many values threatened by this must be overlaid, and a detailed analysis of the severity of the effects of geothermal leasing, explo and development here must be provided in an EIS for leasing. Please do not segment the

NEPA process and analysis.

The applications are for leasing only. No ground disturbing activities are proposed at this time. Prior to any ground disturbing activities, the lease holder would be required to submit a separate application for drilling and a plan of operations for development to the BLM for review, analysis, and separate approval. At that time, the BLM (lead agency) would conduct additional site-specific evaluations, in cooperation with the Forest Service, and may require additional reasonable mitigation measures prior to approval for drilling or development. However, new stipulations could not be developed at that time. Holders of geothermal leases are required to comply with all applicable federal, state, and local laws and regulations, including obtaining all necessary permits required, should lease development occur.
It is important to be aware that the Forest's discretion is limited by the fact that the application area **has not been withdrawn from leasing** [THIS must be fixed – and the Forest must take necessary actions to withdraw or place off limits through a LUP amendment]; therefore, the Forest is required to complete this
exercise. After we have completed the leasing NEPA and BLM offers the lease(s) with our stipulations, the applicant has to decide whether to accept our conditions in order to obtain the lease. Alternatively, the applicant could appeal our stipulations, contending they are unsupported by higher level decisions (e.g. Forest Plan, statues, regulations). So we have to be very precise in defining and rationalizing our stipulations.

With the limited information in Scoping, the Forest can not develop sufficiently precise stipulations - ranging from stipulations related to bright lights, noise, visual, cultural wildfire habitat disturbance, etc.


TERRA-GEN
DIXIE VALLEY, LLC
DIXIE VALLEY FEDERAL 45-14
FEDERAL LEASE #N-11583
2310' FSL, 2310' FWL
SEC. 14, T23N, R35E
CHURCHILL COUNTY, NV.
ELEVATION 3420' GL

We request a site visit.

Sincerely,

Katie Fite
Western Watersheds
PO Box 2863
Boise, ID 83701

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